



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
Fax 613 632-5246

12861

# D3531-1 Job Sheet 189300



Part No: D3531-1

Part Name: Bracket



Part Weight: 0 lbs

Job Created: 1/22/19

Due Date: 2/12/19

Type: SOLD

Note: DWG REV B SHEETS 2,3 IPP Rev:A New Issue 07-09-24 EC verified by DD IPP REV:B 12.10.24 PER DWG  
REV.B DD VERF:JLM

Ship Via:

Job Qty: 4 pcs

Status: New

Priority: Medium

Job Tracking No:

Created By: Dara Macdonald

Description:

## Bill of Materials

## Job Routing

| Op No | Operation           | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off    |
|-------|---------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|-------------|
|       |                     |       |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier | Lead Time |             |
| 100   | Waterjet - Flow - 1 | 4 pcs |            | 2/12/19  | 0.00      | 0.39    | Waterjet - Flow       |           | OK 19/02/11 |
| 110   | QC 2                | 4 pcs |            | 2/12/19  | 0.00      | 0.00    | QC 2 - 1              |           |             |
|       |                     |       |            |          |           |         | QC 2 - 12             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 14             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 17             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 19             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 2              |           |             |
|       |                     |       |            |          |           |         | QC 2 - 20             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 22             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 23             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 25             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 32             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 33             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 35             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 38             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 39             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 4              |           |             |
|       |                     |       |            |          |           |         | QC 2 - 40             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 44             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 45             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 48             |           | OK 19/02/11 |
|       |                     |       |            |          |           |         | QC 2 - 49             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 50             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 51             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 52             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 54             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 56             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 57             |           |             |
|       |                     |       |            |          |           |         | QC 2 - 62             |           |             |

|                                   |          |         |           |                             |                |
|-----------------------------------|----------|---------|-----------|-----------------------------|----------------|
| 120 QC 8                          | 4<br>pcs | 2/12/19 | 0.00 0.00 | QC 2 - 63                   |                |
|                                   |          |         |           | QC 2 - 8                    |                |
|                                   |          |         |           | QC 8 - 12                   |                |
|                                   |          |         |           | QC 8 - 14                   |                |
|                                   |          |         |           | QC 8 - 17                   |                |
|                                   |          |         |           | QC 8 - 20                   |                |
|                                   |          |         |           | QC 8 - 25                   |                |
|                                   |          |         |           | QC 8 - 3                    |                |
|                                   |          |         |           | QC 8 - 32                   |                |
|                                   |          |         |           | QC 8 - 33                   |                |
|                                   |          |         |           | QC 8 - 35                   |                |
|                                   |          |         |           | QC 8 - 38                   |                |
|                                   |          |         |           | QC 8 - 39                   |                |
|                                   |          |         |           | QC 8 - 4                    |                |
|                                   |          |         |           | QC 8 - 44                   |                |
|                                   |          |         |           | QC 8 - 45                   |                |
|                                   |          |         |           | QC 8 - 49                   | DAS            |
|                                   |          |         |           | QC 8 - 58                   | 58 FEB 12 2019 |
|                                   |          |         |           | QC 8 - 8                    | 9-89           |
|                                   |          |         |           | QC 8 - 9                    |                |
|                                   |          |         |           | QC 8 - 68                   |                |
|                                   |          |         |           | QC 8 - 67                   |                |
| 130 Small Fab - Brake NC - B4B    | 4<br>pcs | 2/12/19 | 0.08 0.38 | Small Fab - Brake - 1 - B4B | DAS            |
|                                   |          |         |           | Small Fab - Brake - 2 - B4B | 30             |
|                                   |          |         |           | Small Fab - Brake - 3 - B4B | 9-89           |
| 140 QC 5                          | 4<br>pcs | 2/12/19 | 0.00 0.00 | QC 5 - 10                   |                |
|                                   |          |         |           | QC 5 - 12                   |                |
|                                   |          |         |           | QC 5 - 17                   |                |
|                                   |          |         |           | QC 5 - 18                   |                |
|                                   |          |         |           | QC 5 - 19                   |                |
|                                   |          |         |           | QC 5 - 22                   |                |
|                                   |          |         |           | QC 5 - 24                   |                |
|                                   |          |         |           | QC 5 - 3                    |                |
|                                   |          |         |           | QC 5 - 38                   |                |
|                                   |          |         |           | QC 5 - 42                   |                |
|                                   |          |         |           | QC 5 - 43                   |                |
|                                   |          |         |           | QC 5 - 49                   |                |
|                                   |          |         |           | QC 5 - 51                   |                |
|                                   |          |         |           | QC 5 - 58                   |                |
|                                   |          |         |           | QC 5 - 68                   |                |
|                                   |          |         |           | QC 5 - 9                    | DAS            |
|                                   |          |         |           | QC 5 - 50                   | 40             |
|                                   |          |         |           | QC 5 - 30                   | 9-89           |
| 150 Handfinish - 1-1 Chemical-B4B | 4<br>pcs | 2/12/19 | 0.00 0.17 | Handfinish - 1 - 1 - B4B    |                |
|                                   |          |         |           | Handfinish - 1 - 2 - B4B    |                |
|                                   |          |         |           | Handfinish - 1 - 3 - B4B    |                |
|                                   |          |         |           | Handfinish - 1 - 4 - B4B    |                |
|                                   |          |         |           | Handfinish - 1 - 5 - B4B    |                |
|                                   |          |         |           | Handfinish - 1 - 6 - B4B    |                |
|                                   |          |         |           | Handfinish - 1 - 7 - B4B    |                |
|                                   |          |         |           | Handfinish - 1 - 8 - B4B    |                |
|                                   |          |         |           | Handfinish - 1 - 9 - B4B    |                |
|                                   |          |         |           | Handfinish - 1 - 10 - B4B   |                |
|                                   |          |         |           | Handfinish - 1 - 11 - B4B   |                |
|                                   |          |         |           | Handfinish - 1 - 12 - B4B   |                |
|                                   |          |         |           | Handfinish - 1 - 13 - B4B   |                |
|                                   |          |         |           | Handfinish - 1 - 14 - B4B   |                |

DAS  
58 FEB 12 2019  
9-89

DAS  
30  
9-89

DAS  
40  
9-89  
MAR 15 2019

D.R 19/03/18

19/02/15



Plex 1/22/19 1:07 PM Dart.Macdonald.Dara

|     |            |          |         |                        |                 |
|-----|------------|----------|---------|------------------------|-----------------|
|     |            |          |         | Packaging 3 - 25 - B4B |                 |
|     |            |          |         | Packaging 3 - 26 - B4B |                 |
|     |            |          |         | Packaging 3 - 27 - B4B |                 |
|     |            |          |         | Packaging 3 - 28 - B4B |                 |
|     |            |          |         | Packaging 3 - 29 - B4B |                 |
|     |            |          |         | Packaging 3 - 30 - B4B |                 |
|     |            |          |         | Packaging 3 - 31 - B4B |                 |
|     |            |          |         | Packaging 3 - 32 - B4B |                 |
|     |            |          |         | Packaging 3 - 33 - B4B |                 |
|     |            |          |         | Packaging 3 - 34 - B4B |                 |
|     |            |          |         | Packaging 3 - 35 - B4B |                 |
| 180 | QC 21 - SA | 4<br>pcs | 2/12/19 | 0.00 0.00              | QC 21 - SA - 21 |
|     |            |          |         |                        | QC 21 - SA - 70 |

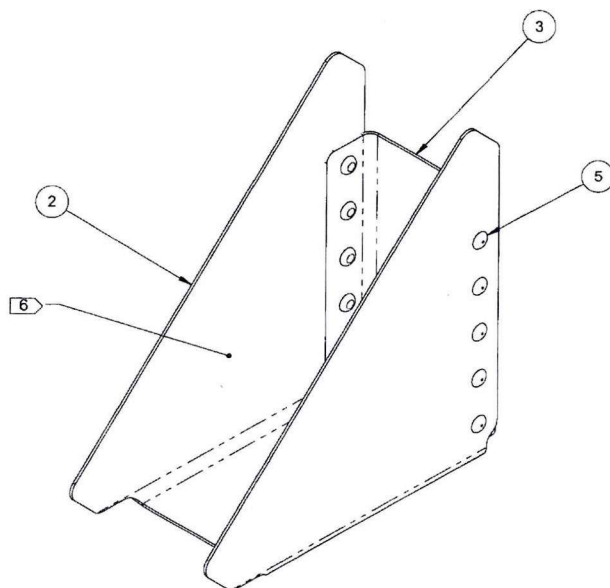
Part Op 110 - (QC2- Inspect parts off machine FAI/FAIB)  
 Descriptions: 120 - (QC8- Inspect parts - second check)  
 130 - (Bend/Assemble as per dwg)  
 140 - (QC5- Inspect part completeness to step on W/O)  
 150 - (Chemical Conversion Coat per QSI005 4.1)  
 160 - (QC7-Inspect Chemical Conversion Coat)  
 170 - (Identify as per dwg & Stock Location: \_\_\_\_\_)  
 180 - (QC21- Final Inspection - Work Order Release)

| Job BOM      |                    |                      |                         |           |
|--------------|--------------------|----------------------|-------------------------|-----------|
| Part / Item  | Component Name     | Quantity             | Operation               | Container |
| M6061T6S.040 | 6061-T6 .040 Sheet | 1.5132 sf (.3783 ea) | 100-Waterjet - Flow - 1 |           |

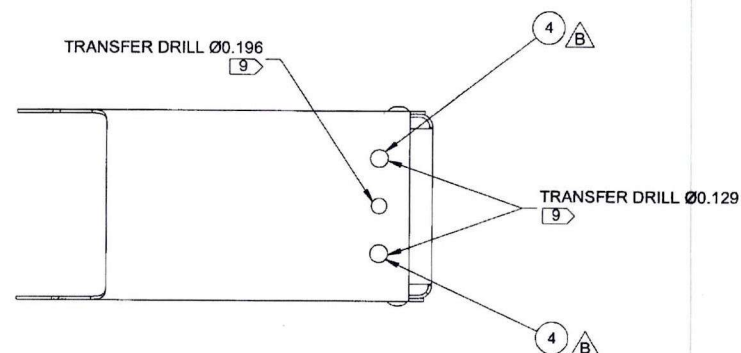
| Job Allocations         |                |          |           |           |
|-------------------------|----------------|----------|-----------|-----------|
| Operation               | Component Part | Required | Inventory | Allocated |
| 100-Waterjet - Flow - 1 | M6061T6S.040   | 2        | 11        | 0         |

| Part Specifications                |
|------------------------------------|
| Specifications could not be found. |

| ITEM NO. | QTY.<br>-041 | PART NUMBER  | DESCRIPTION         |
|----------|--------------|--------------|---------------------|
| 1        | X            | D3531-041    | BRACKET ASSEMBLY    |
| 2        | 1            | D3531-1      | BRACKET             |
| 3        | 1            | D3531-3      | BRACKET FRONT PLATE |
| 4        | 2            | MS20426AD4-4 | RIVET               |
| 5        | 10           | MS20470AD4-4 | RIVET               |



**D3531-041 BRACKET ASSEMBLY**



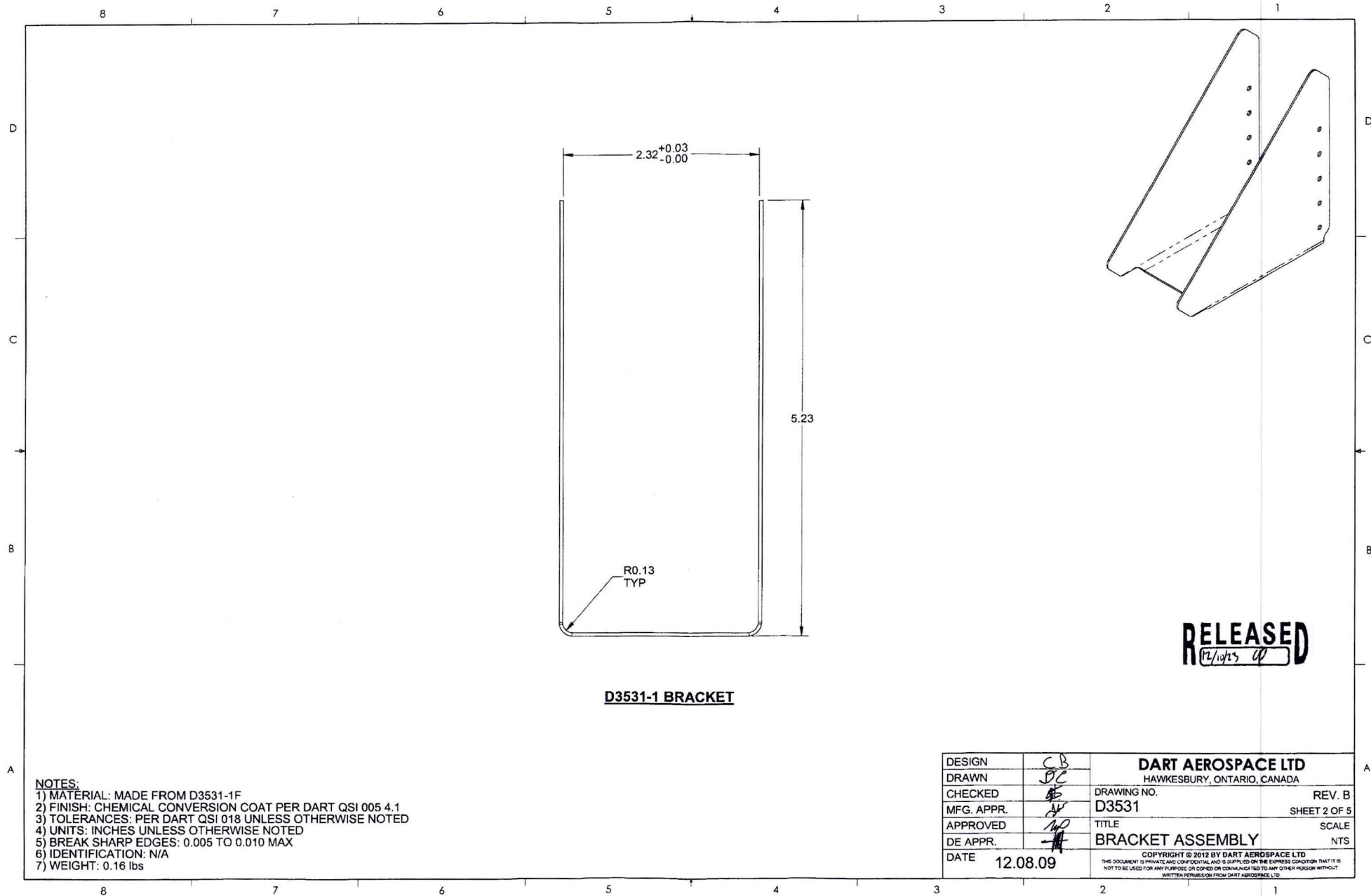
**D3531-041 BRACKET ASSEMBLY  
BOTTOM VIEW**

**RELEASED**  
12/10/23  
PER BCJ 12-669

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT ASSEMBLY "BLACK SANDTEX" (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1 ON INSIDE OF BRACKET ASSEMBLY, WHERE INDICATED
- 7) WEIGHT: 0.22 lbs
- 8) ASSEMBLE PER DART QSI 003
- 9) TRANSFER DRILL HOLES FROM D3531-1 BRACKET THROUGH D3531-3 BRACKET FRONT PLATE BEFORE FINISHING

| B                                                                                                                                                                                                                                                                                         | CHANGE BOTTOM RIVETS FROM MS20470AD4-4 TO MS20426AD4-4, ZN C2-1, C5-3. ADD CSK, ZN C5-3. CORRECT BEND LINE DIM, ZN C4-3. UPDATE TO CURRENT DWG STANDARDS, REF PAR 10-47. | DC | 12.08.09 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------|
| A                                                                                                                                                                                                                                                                                         | NEW ISSUE                                                                                                                                                                | CB | 07.06.19 |
| REV.                                                                                                                                                                                                                                                                                      | DESCRIPTION                                                                                                                                                              | BY | DATE     |
| DESIGN                                                                                                                                                                                                                                                                                    | C.B.                                                                                                                                                                     |    |          |
| DRAWN                                                                                                                                                                                                                                                                                     | DC                                                                                                                                                                       |    |          |
| CHECKED                                                                                                                                                                                                                                                                                   | DC                                                                                                                                                                       |    |          |
| MFG. APPR.                                                                                                                                                                                                                                                                                | DC                                                                                                                                                                       |    |          |
| APPROVED                                                                                                                                                                                                                                                                                  | DC                                                                                                                                                                       |    |          |
| DE APPR.                                                                                                                                                                                                                                                                                  | DC                                                                                                                                                                       |    |          |
| DATE                                                                                                                                                                                                                                                                                      | 12.08.09                                                                                                                                                                 |    |          |
| <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA<br>DRAWING NO. <b>D3531</b><br>TITLE <b>BRACKET ASSEMBLY</b><br>SCALE <b>NTS</b><br>REV. B<br>SHEET 1 OF 5                                                                                                                       |                                                                                                                                                                          |    |          |
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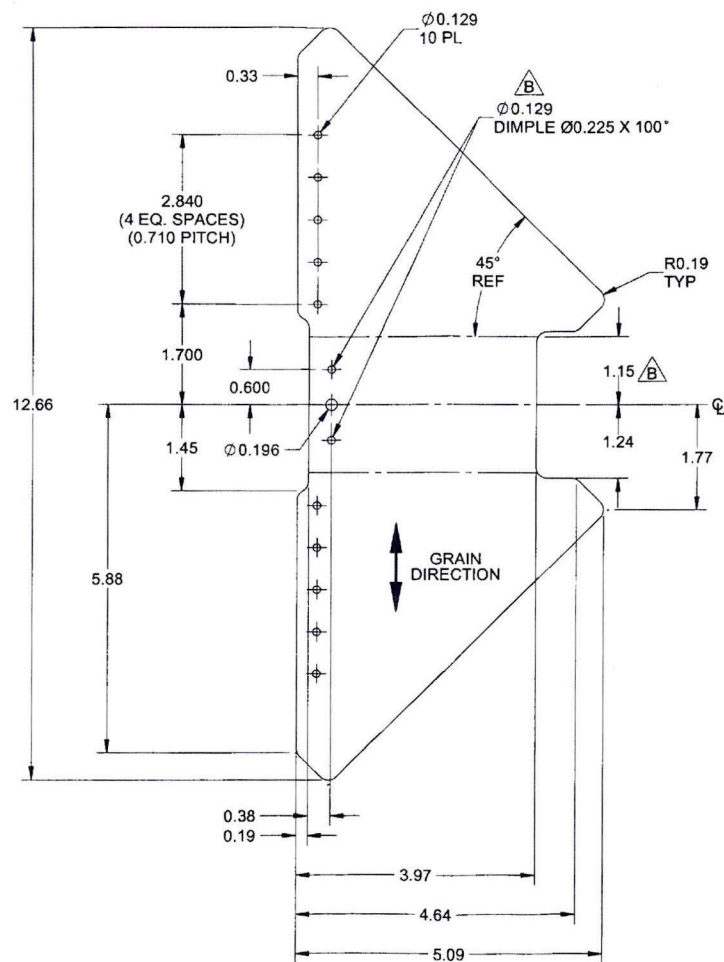
**RELEASED**  
12/10/15

**NOTES:**

- 1) MATERIAL: MADE FROM D3531-1F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.16 lbs

|            |          |                                                                                                                                                                                                                                                                                                 |              |
|------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | CB       | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                       |              |
| DRAWN      | DC       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                                     |              |
| CHECKED    | AS       | DRAWING NO.                                                                                                                                                                                                                                                                                     | REV. B       |
| MFG. APPR. | AS       | <b>D3531</b>                                                                                                                                                                                                                                                                                    | SHEET 2 OF 5 |
| APPROVED   | MP       | TITLE                                                                                                                                                                                                                                                                                           | SCALE        |
| DE APPR.   | MP       | <b>BRACKET ASSEMBLY</b>                                                                                                                                                                                                                                                                         | NTS          |
| DATE       | 12.08.09 | <small>COPYRIGHT © 2012 BY DART AEROSPACE LTD<br/>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS<br/>NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT<br/>WRITTEN PERMISSION FROM DART AEROSPACE LTD</small> |              |





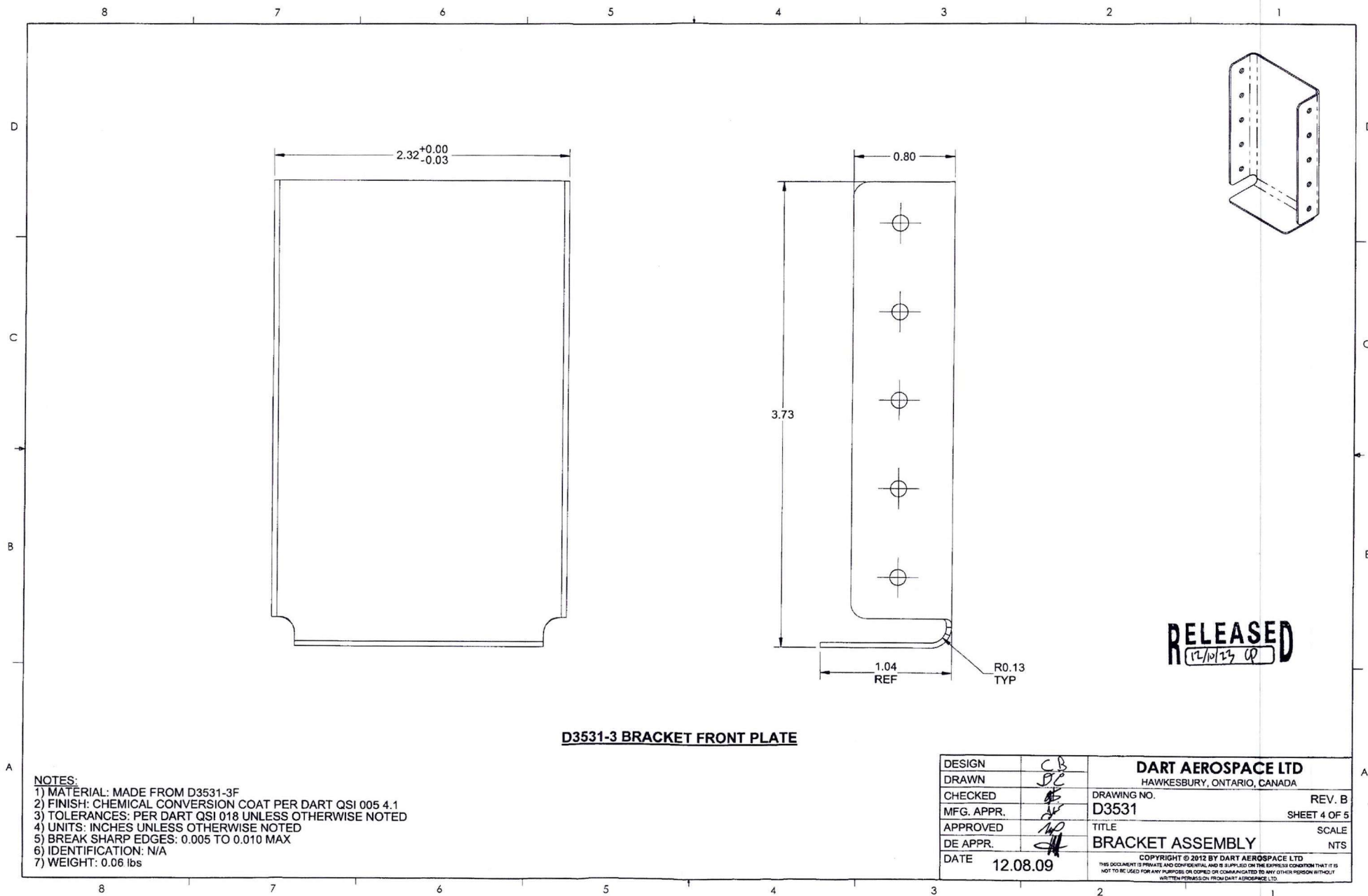
**D3531-1F FLAT PATTERN**

**NOTES:**

- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.040 THICK  
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209  
REF DART SPEC M6061T6S.040
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.16 lbs

**RELEASED**  
12/14/23

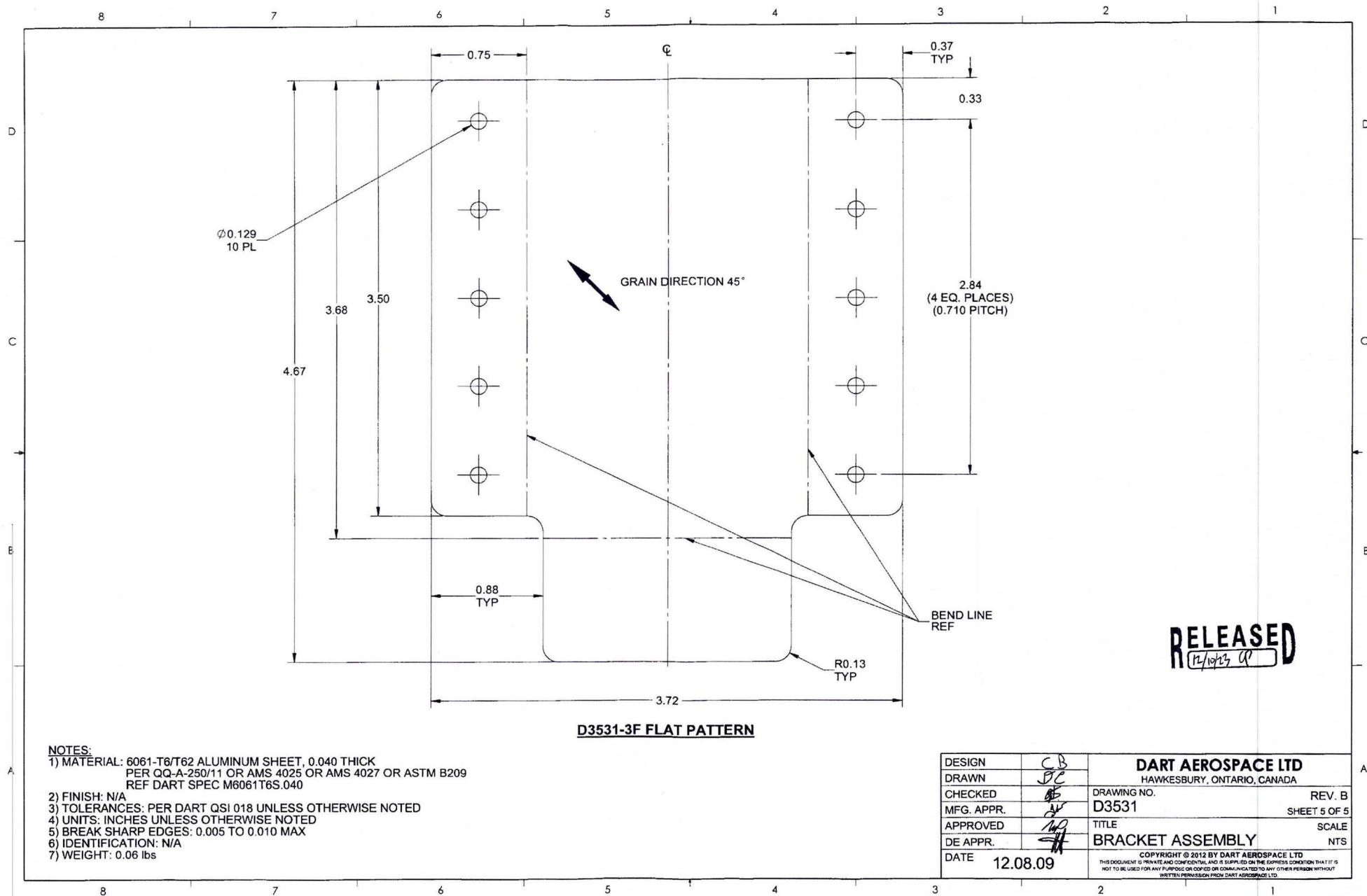
|            |          |                                                                                                                                                                                                                                                                                                   |              |
|------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | CB       | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                                         |              |
| DRAWN      | BC       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                                       |              |
| CHECKED    | JE       | DRAWING NO.                                                                                                                                                                                                                                                                                       | REV. B       |
| MFG. APPR. | JE       | D3531                                                                                                                                                                                                                                                                                             | SHEET 3 OF 5 |
| APPROVED   | JE       | TITLE                                                                                                                                                                                                                                                                                             | SCALE        |
| DE APPR.   | JE       | BRACKET ASSEMBLY                                                                                                                                                                                                                                                                                  | NTS          |
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**D3531-3 BRACKET FRONT PLATE**

|            |          |                                                                                                                                                                                                                                                                                          |              |
|------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | CB       | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                 |              |
| DRAWN      | DC       |                                                                                                                                                                                                                                                                                          |              |
| CHECKED    | JS       | DRAWING NO.                                                                                                                                                                                                                                                                              | REV. B       |
| MFG. APPR. | JS       | D3531                                                                                                                                                                                                                                                                                    | SHEET 4 OF 5 |
| APPROVED   | NO       | TITLE                                                                                                                                                                                                                                                                                    | SCALE        |
| DE APPR.   | SH       | BRACKET ASSEMBLY                                                                                                                                                                                                                                                                         | NTS          |
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# NOTES:

- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.040 THICK  
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209  
REF DART SPEC M6061T6S.040
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.06 lbs

## D3531-3F FLAT PATTERN

|                                                                                                                                                                                                                                |          |                                        |              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------|--------------|
| DESIGN                                                                                                                                                                                                                         | CB       | DART AEROSPACE LTD                     |              |
| DRAWN                                                                                                                                                                                                                          | DC       | HAWKESBURY, ONTARIO, CANADA            |              |
| CHECKED                                                                                                                                                                                                                        | JP       | DRAWING NO.                            | REV. B       |
| MFG. APPR.                                                                                                                                                                                                                     | JP       | D3531                                  | SHEET 5 OF 5 |
| APPROVED                                                                                                                                                                                                                       | JP       | TITLE                                  | SCALE        |
| DE APPR.                                                                                                                                                                                                                       | JP       | BRACKET ASSEMBLY                       | NTS          |
| DATE                                                                                                                                                                                                                           | 12.08.09 | COPYRIGHT © 2012 BY DART AEROSPACE LTD |              |
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|                                            |  |                     |                |
|--------------------------------------------|--|---------------------|----------------|
| <b>DART AEROSPACE LTD</b>                  |  | <b>Work Order:</b>  |                |
| <b>Description:</b> Bracket                |  | <b>Part Number:</b> | <b>D3531-1</b> |
| <b>Inspection Dwg:</b> D3531 <b>Rev:</b> B |  | <b>Page 1 of 1</b>  |                |

### FIRST ARTICLE INSPECTION CHECKLIST

| Drawing Dimension | Tolerance     | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|---------------|------------------|--------|--------|----------------------|----------|
| Ø0.196            | +0.005/-0.001 | Ø.195            | 1      |        |                      |          |
| Ø0.129            | +0.005/-0.001 | Ø.131            | 1      |        |                      |          |
| 0.33              | +/-0.030      | .33              | 1      |        |                      |          |
| 2.840             | +/-0.010      | 2.842            | 1      |        |                      |          |
| 1.70              | +/-0.030      | 1.70             | 1      |        |                      |          |
| 1.45              | +/-0.030      | 1.45             | 1      |        |                      |          |
| 0.38              | +/-0.030      | .38              | 1      |        |                      |          |
| 0.19              | +/-0.030      | .19              | 1      |        |                      |          |
| 5.88              | +/-0.030      | 5.88             | 1      |        |                      |          |
| 12.66             | +/-0.030      | 12.66            | 1      |        |                      |          |
| 0.600             | +/-0.010      | .601             | 1      |        |                      |          |
| 1.77              | +/-0.030      | 1.77             | 1      |        |                      |          |
| 1.24              | +/-0.030      | 1.24             | 1      |        |                      |          |
| 1.16              | +/-0.030      | 1.16             | 1      |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |
|                   |               |                  |        |        |                      |          |

|                               |                    |                              |
|-------------------------------|--------------------|------------------------------|
| <b>Measured by:</b> <i>De</i> | <b>Audited by:</b> | <b>Preliminary Approval:</b> |
| <b>Date:</b> 19/02/11         | <b>Date:</b>       | <b>Date:</b>                 |

| Rev | Date     | Change          | Revised by            | Approved           |
|-----|----------|-----------------|-----------------------|--------------------|
| A   | 07.10.15 | New Issue       | KJ/EC/DD              |                    |
| B   | 13.02.27 | Dwg Rev updated | KJ <i>[Signature]</i> | <i>[Signature]</i> |

Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |              |                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------|------------------------|
| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> | <b>DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Water Jet <input type="checkbox"/><br/>           Supplier Quality <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |              |                        |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Sequence #: _____                                                                                                                 | QTY Affected : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | MRB (QSI042) |                        |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |              | Completed By           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |              | Lead hand / Supervisor |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |              |                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |              | QC / QA Coordinator    |
| <b>Root Cause</b><br><br><div style="display: flex; flex-direction: column;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Preservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div> |                                                                                                                                   | <b>FAULT CATEGORY</b><br><br><div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Pressure/Forced<br/> <input type="checkbox"/> Bending<br/> <input type="checkbox"/> Crushing<br/> <input type="checkbox"/> Cracks<br/> <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist<br/> <input type="checkbox"/> Marks/Chatter<br/> <input type="checkbox"/> Mislabeled         </div> <div style="width: 50%;"> <input type="checkbox"/> Contamination<br/> <input type="checkbox"/> Misaligned/off center<br/> <input type="checkbox"/> BOM/Route<br/> <input type="checkbox"/> Broken/Damage/Defect<br/> <input type="checkbox"/> Incomplete/Unclear Instructions<br/> <input type="checkbox"/> Drill Holes<br/> <input type="checkbox"/> Fit/Function         </div> <div style="width: 50%;"> <input type="checkbox"/> Power Loss/Surge<br/> <input type="checkbox"/> Folio/Program<br/> <input type="checkbox"/> Grain Direction<br/> <input type="checkbox"/> Weld<br/> <input type="checkbox"/> Wrong Stock Pulled<br/> <input type="checkbox"/> Out of Sequence<br/> <input type="checkbox"/> Off-set/Set-up         </div> <div style="width: 50%;"> <input type="checkbox"/> Positioned Wrong<br/> <input type="checkbox"/> Outside Tolerance<br/> <input type="checkbox"/> Drawing<br/> <input type="checkbox"/> Finish<br/> <input type="checkbox"/> Part Lost/Missing<br/> <input type="checkbox"/> Misread         </div> </div> |  |              |                        |
| Other/Details:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |              |                        |



Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|
| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> | <b>DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Water Jet <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Quality <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                        |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Sequence #:                                                                                                                       | QTY Affected :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | MRB (QSI042)           |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | Completed By           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Lead hand / Supervisor |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | QC / QA Coordinator    |  |
| <b>Root Cause</b><br><br><div style="display: flex; flex-direction: column; align-items: flex-start;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Presservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div> |                                                                                                                                   | <b>FAULT CATEGORY</b><br><br><div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Pressure/Forced<br/> <input type="checkbox"/> Bending<br/> <input type="checkbox"/> Crushing<br/> <input type="checkbox"/> Cracks<br/> <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist<br/> <input type="checkbox"/> Marks/Chatter<br/> <input type="checkbox"/> Mislabeled         </div> <div style="width: 50%;"> <input type="checkbox"/> Contamination<br/> <input type="checkbox"/> Misaligned/off center<br/> <input type="checkbox"/> BOM/Route<br/> <input type="checkbox"/> Broken/Damage/Defect<br/> <input type="checkbox"/> Incomplete/Unclear Instructions<br/> <input type="checkbox"/> Drill Holes<br/> <input type="checkbox"/> Fit/Function         </div> <div style="width: 50%;"> <input type="checkbox"/> Power Loss/Surge<br/> <input type="checkbox"/> Folio/Program<br/> <input type="checkbox"/> Grain Direction<br/> <input type="checkbox"/> Weld<br/> <input type="checkbox"/> Wrong Stock Pulled<br/> <input type="checkbox"/> Out of Sequence<br/> <input type="checkbox"/> Off-set/Set-up         </div> <div style="width: 50%;"> <input type="checkbox"/> Positioned Wrong<br/> <input type="checkbox"/> Outside Tolerance<br/> <input type="checkbox"/> Drawing<br/> <input type="checkbox"/> Finish<br/> <input type="checkbox"/> Part Lost/Missing<br/> <input type="checkbox"/> Misread         </div> </div> |  |                        |  |
| Other/Details:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |





**Container No: S152420**



**Part: D3531-1**

**Job No: 189300**

**Serial No/Batch: S152420**

**Revision:**

**Inspector:**

**Exp Date:**

**Instructions: Various STC's**

**Dart Aerospace Ltd.**  
1270 Aberdeen Street  
Hawkesbury, ON K64 1K7  
CANADA  
TEL.: 1 613 632-5200  
Email: sales@dartaero.com  
www.dartaerospace.com

**Date: 02/11/19**